

What is claimed is:

1. A luminous device comprises of:

A substrate;

5 A plurality of transparent electrodes, in which a plurality of convex transparent electrodes are formed onto the substrate in ordered arrangement with an appropriate distance between each other;

A conductive layer, which is located on the top layer of the luminous device and parallel to the substrate;

10 An insulating film layer, in which it forms between the substrate and a conductive layer, by using the exposing and developing method to remove a plurality of insulating film on the central portion of transparent electrodes (but the edge portion of transparent electrode is still covered by an insulating film), it
15 forms a plurality of insulating film layers between cavity and insulating convex, the bottom of cavity is a transparent electrode, and two side of the cavity are the insulating film material;

A hole-transport layer, in which it forms onto a hole-injection layer in an insulating film cavity;

20 A light-emitting layer, in which it forms onto a hole-transport layer in an insulating film cavity; and

An electron-transport layer, in which it forms a light-emitting layer in an insulating film cavity, through the composition described above it forms a luminous device.

25 2. A luminous device of claim 1 wherein said the substrate can be

selected from glass or plastic film.

3. A luminous device of claim 1 wherein said the thickness range of the insulating film layer is 50 ~ 5000 nm for a positive insulating film, and the composition includes phenolic resin,
5 photoactive compound, thermosetting resin, and/or catalyst, solvent, and/or other adhesive promoter.
4. The composition of an insulating film layer of claim 1 wherein said the insulating convex top face is a smooth convex ball face shape, and its convex angle is an inclining obtuse angle, it
10 becomes a gradient smooth and gradually widening shape from the top face to the bottom face.
5. A luminous device of claim 1 wherein said the insulating convex shape results from the postbake heated reflow.
6. A luminous device of claim 1 wherein said the material of a
15 plurality of transparent electrodes can be selected from indium-tin-oxide (ITO), indium-zinc-oxide (IZO), etc.
7. A luminous device of claim 1 wherein said the material of the conductive layer can be selected from Al, Ca, Mg, Li, and its alloy.
- 20 8. The composition of an insulating film layer of claim 3 wherein said the thermosetting resin can be selected from melamine formaldehyde resins, benzoguanamine formaldehyde resins, or glycoluril formaldehyde resins.
9. The composition of an insulating film layer of claim 3 wherein
25 said the catalyst is acidic or potentially acidic, and the acid is

released during the bake.

10092427.030802